PIPING LEGEND

LPS	LPS	LOW PRESSURE STEAM
LPC	LPC	LOW PRESSURE STEAM CONDENSATE
HWS	HWS	HOT WATER SUPPLY
HWR	HWR	HOT WATER RETURN
V	V	VENT
	X	PIPING TO BE REMOVED
	E	EXISTING PIPING TO REMAIN
		PIPE OFF BOTTOM
		PIPE OFF TOP
		RUN-OUT OFF TOP
		RUN-OUT OFF BOTTOM
		BRANCH CONNECTION (DIRECTION TO BE FIELD DETERMINED)
		PIPE UP
		PIPE DOWN
		DIRECTION OF FLOW
		PIPE BREAK
		DRAIN PIPE PITCH AND FLOW

VALVE LEGEND

	IS	ISOLATION VALVE REFER TO DETAILS AND SPEC.
	GV	GATE VALVE
	GLV	GLOBE VALVE
	BLV	BALL VALVE
	BFV	BUTTERFLY VALVE
	DV	DRAIN VALVE
	SCV	SWING CHECK VALVE
	LCV	LIFT CHECK VALVE
	BC	BALANCE COCK
	BV	BALANCE VALVE
	PRV	PRESSURE REDUCING VALVE
	RV	RELIEF VALVE
	SC	CONTROL VALVE
		PILOT OPERATED PRESSURE REDUCING VALVE
		UNION
	FLG	FLANGE
	PLS	PIPE LINE STRAINER
	BKS	BASKET STRAINER
	CRD	CONCENTRIC REDUCER (ENLARGER)
	ERD	ECCENTRIC REDUCER (ENLARGER)
	TRM	THERMOMETER
	PG	PRESSURE GAUGE
	FSW	FLOW SWITCH
	AAV	AUTOMATIC AIR VENT
	MAV	MANUAL AIR VENT
	FS	FLOW SIWTCH
	AN	PIPE ANCHOR
	GD	PIPE GUIDE
	EC	EXPANSION COMPENSATOR
	PFC	PIPE FLEXIBLE CONNECTION
	TT	THERMOSTATIC STEAM TRAP
	F&TT	FLOAT & THERMOSTATIC STEAM TRAP
	BT	BUCKET STEAM TRAP
	PT	PRESSURE/TEMPERATURE PLUG
		PIPE CAP
		STRAINER WITH DRAIN VALVE AND CAP

DUCTWORK LEGEND

12"x8"	RECTANGULAR DUCTWORK - FIRST DIMENSION IS SIDE SHOWN (IN.)
12"Ø	ROUND DUCTWORK - DIMENSION IS DUCT DIAMETER (IN.)
(E) 12"x8"	EXISTING DUCTWORK TO REMAIN
(X) 12"x8"	EXISTING DUCTWORK TO BE DEMOLISHED
	RECTANGULAR SUPPLY DUCTWORK UP
	RECTANGULAR SUPPLY DUCTWORK DOWN
	RECTANGULAR RETURN/EXHAUST DUCTWORK UP
	RECTANGULAR RETURN/EXHAUST DUCTWORK DOWN
	ROUND DUCTWORK UP
	ROUND DUCTWORK DOWN
	BEAM PENETRATION BY DUCTWORK
	CAPPED DUCTWORK
	ACOUSTICALLY LINED DUCTWORK
	FLEXIBLE CONNECTION
	RECTANGULAR TRANSITION
	RECTANGULAR TO ROUND DUCTWORK TRANSITION
	MITERED ELBOW WITH TURNING VANES
	1/2" WIRE MESH SCREEN (ON OPEN END DUCT)

MECHANICAL DEMOLITION / RELOCATION LEGEND

"X"	EXISTING MECHANICAL EQUIPMENT, DEVICE AND/OR SYSTEM TO BE SELECTIVELY DEMOLISHED
"XR"	EXISTING MECHANICAL EQUIPMENT TO BE REMOVED, STORED AND RE-LOCATED.
"XT"	EXISTING MECHANICAL DEVICE OR EQUIPMENT TO BE REMOVED AND TURNED OVER TO OWNER FOR RE-USE
"XL"	RE-LOCATED EXISTING MECHANICAL EQUIPMENT OR DEVICE.
"E"	EXISTING MECHANICAL EQUIPMENT OR DEVICE TO REMAIN

EXAMPLE

X XR XT XL E

DAMPERS

M	ACD	MOTORIZED OR AUTOMATIC CONTROL DAMPER
SD	SD	SMOKE DAMPER
BD	BD	BACK DRAFT DAMPER
FD	FD	FIRE DAMPER
FS	FS	FIRE & SMOKE DAMPER
	VD	VOLUME DAMPER

CONTROL LEGEND

DPS OR DPS	DIFFERENTIAL PRESSURE SENSOR
T	HEAT/COOL THERMOSTAT
Hs	HUMIDITY SENSOR
H	HUMIDISTAT
Ts	TEMPERATURE SENSOR
P	PRESSURE DISPLAY
	CONTROL LINE

DRAWING NOTES

SG-A, RG-A or EG-A 10"Ø, 12"x12" 200 TYP 3	SUPPLY/RETURN/EXHAUST REGISTER OR GRILLE TAG NECK SIZE OR LENGTH IF LINEAR DIFFUSER AIR VOLUME (CFM) QUANTITY
SD-A-# 10"Ø, 12"x12" 200 TYP 3	SUPPLY DIFFUSER TAG NECK SIZE OR LENGTH IF LINEAR DIFFUSER AIR VOLUME (CFM) QUANTITY
FTR-A 10'-0" 11.8	FIN TUBE RADIATION DESIGNATION ELEMENT LENGTH HEATING CAPACITY (MBH)
ACCU-1	EQUIPMENT TAG
1	REVISION NOTE
1	DEMOLITION WORK NOTE
1	NEW WORK NOTE
1	NEW WORK NOTE
	CONNECT TO EXISTING
	CAP EXISTING
	LIMIT OF DEMOLITION
	REVISION CLOUD
	ELECTRICAL AREA - THE AREA INDICATED IS AN ELECTRICAL ZONE. DUCTWORK, PIPING, AND SYSTEMS SHALL NOT RUN THROUGH THIS ZONE. EXCEPTION:PIPES, DUCTS, AND EQUIPMENT DEDICATED TO SERVE THE ZONE ARE ALLOWED. COORDINATE WITH ELECTRICAL CONTRACTOR AND COMPLY WITH ALL CODE CLEARANCE REQUIREMENTS.

EQUIPMENT TAGS

EG	EXHAUST GRILLE
H	HUMIDIFIER
RG	RETURN GRILLE
SD	SUPPLY DIFFUSER
V	VARIABLE AIR VOLUME BOX

AIR DEVICE LEGEND

SG	SIDEWALL SUPPLY REGISTER
SD	SUPPLY DIFFUSER ARROWS INDICATE BLOW PATTER
RG	RETURN GRILLE
EG	EXHAUST REGISTER OR GRILLE
EG/RG	SIDEWALL EXHAUST/RETURN REGISTER
SD/R	SUPPLY DIFFUSER OR REGISTER BELOW DUCT
RG	RETURN REGISTER OR GRILLE BELOW DUCT
EG	EXHAUST REGISTER OR GRILLE BELOW DUCT
	SUPPLY AIR
	RETURN OR EXHAUST AIR
U	UNDERCUT DOORWAY (BY G.C.)
DL	DOOR LOUVER (BY G.C.)

ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
ARCH.	ARCHITECT
AS	AIR SEPARATOR
ATC	AUTOMATIC TEMPERATURE CONTROL
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CLOSED
CA	COMBUSTION AIR
CAP	CAPACITY
CAS	COMBUSTION AIR SUPPLY
CC	COOLING COIL
CFM	CUBIC FEET PER MINUTE
CO	CLEAN OUT
CONN.	CONNECT
CONTR	CONTRACTOR
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE (°F)
DDC	DIRECT DIGITAL CONTROL
DIA.	DIAMETER
DN	DOWN
DR	DRAIN
DWG	DRAWING
EA	EACH
E.A.	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EL	EXPANSION LOOP
FMS	FACILITY MANAGEMENT SYSTEM
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
ETBR	EXISTING TO BE REMOVED
ETR	EXISTING TO REMAIN
EWT	ENTERING WATER TEMPERATURE
EX.	EXISTING
EXH	EXHAUST
FA	FREE AREA
FAI	FRESH AIR INTAKE
FLA	FULL LOAD AMPS
FLD	FLOOR DRAIN
FPC	FIRE PROTECTION CONTRACTOR
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FT	FEET
GAL	GALLONS
GC	GENERAL CONTRACTOR
GE	GENERAL EXHAUST
GPM	GALLONS PER MINUTE
GUH	GAS FIRED UNIT HEATER
HC	HEATING COIL
HE	HOOD EXHAUST
HP	HORSE POWER
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
IN	INCHES
ID	INSIDE DIAMETER
KE	KITCHEN EXHAUST
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LD	LOUVERED DOOR
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BRITISH THERMAL UNITS PER HOUR
MEC	MECHANICAL CONTRACTOR
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR
RM	ROOM
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SF	SQUARE FEET
SP	STATIC PRESSURE
SPD	SPEED
SS	STAINLESS STEEL
SST	SATURATED SUCTION TEMPERATURE
TA	TRANSFER AIR
TD	TRANSFER AIR DUCT
TE	TOILET EXHAUST
TSTAT	THERMOSTAT
TYP	TYPICAL
UC	UNDERCUT DOOR
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB TEMPERATURE (°F)
WMS	WIRE MESH SCREEN

GENERAL NOTES

1. MECHANICAL WORK IS INDICATED DIAGRAMMATIC. EXACT LOCATIONS OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD (SPACING SUBJECT TO ARCHITECT'S REVIEW AND APPROVAL) TO AVOID CONFLICT WITH OTHER TRADES AND EXISTING SITE CONDITIONS.
2. THE CONTRACTOR SHALL VISIT AND CAREFULLY EXAMINE THE SITE TO IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE WORK OF THIS SECTION. REPORT IN WRITING TO THE ARCHITECT CONDITIONS WHICH MIGHT ADVERSELY AFFECT WORK. NO EXTRA PAYMENT WILL BE PROVIDED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY CONSTRUED BY AN EXPERIENCED OBSERVER.
3. WORK REQUIRING INTERRUPTION OF BUILDING SERVICES SHALL BE CAREFULLY REVIEWED AND COORDINATED WITH THE OWNER TO MINIMIZE FREQUENCY AND DURATION OF SERVICE INTERRUPTIONS.
4. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF CEILING GRID, DIFFUSERS, AND GRILLES.
5. ALL INSTALLATIONS SHALL PERMIT AND PROVIDE ACCESSIBILITY FOR SERVICE AND REPLACEMENT OF ALL NEW EQUIPMENT AND EXISTING EQUIPMENT IMPACTED BY THIS WORK.
6. ALL MECHANICAL EQUIPMENT, PIPING, AND DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF GOVERNING LOCAL, STATE, AND FEDERAL SEISMIC CODES. PARTICULAR ATTENTION SHALL BE MADE TO VIBRATION ISOLATION, ANCHORING, AND BALANCING REQUIREMENTS.
7. PROVIDE SMOKE DETECTORS AND SMOKE DAMPERS WHERE SHOWN ON THE MECHANICAL DRAWINGS. COORDINATE THE QUANTITY AND EXACT LOCATION WITH ACTUAL SHEET METAL SHOP DRAWINGS, TO BE PRODUCED BY MECHANICAL CONTRACTOR, AND APPROVED BY ENGINEER. PROVIDE SMOKE DETECTORS AND SMOKE DAMPERS IN BOTH SUPPLY AND RETURN DUCTS ON ALL AIR HANGLERS AS SHOWN IN MECHANICAL DRAWINGS.
8. ALL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH CODES AND STANDARDS SET FORTH IN NFPA, SMACNA, AND ASHRAE FOR LOW PRESSURE DUCTWORK SYSTEMS.
9. PROVIDE MANUAL VOLUME DAMPERS AT ALL BRANCH DUCTS FOR AIR BALANCING.
10. ALL SHEET METAL PLENUMS AT OUTSIDE AIR LOUVERS SHALL BE INSULATED WITH RIGID INSULATION, AS PER SPECIFICATIONS.
11. RUN-OUTS TO RETURN AND EXHAUST REGISTERS, OR GRILLES ABOVE GYP BOARD CEILINGS, SHALL BE RIGID DUCTED. NO FLEXIBLE DUCT WORK SHALL BE ALLOWED ON RETURN OR EXHAUST REGISTERS.
12. ALL DUCTS, PIPES, AND EQUIPMENT SHALL BE INDEPENDENTLY SUPPORTED FROM THE BUILDING STRUCTURE WITH PROPER ALLOWANCES FOR CONTRACTION, EXPANSION, AND VIBRATION ELIMINATION.
13. PROVIDE COPPER 3/4" RUN-OUTS TO HOT WATER REHEAT COILS, CABINET HEATERS AND UNIT HEATERS UNLESS NOTED OTHERWISE.
14. PROVIDE SWING JOINTS AT ALL BRANCH CONNECTIONS TO HYDRONIC EQUIPMENT.
15. ROOM THERMOSTATS SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR UNLESS OTHERWISE SHOWN OR DIRECTED. COORDINATE LOCATIONS WITH ARCHITECTURAL WALL PROTECTIONS.
16. COORDINATE EXACT LOCATION OF UNIT HEATERS WITHIN ELECTRIC ROOMS WITH ELECTRICAL CONTRACTOR.
17. REFER TO SPECIFICATIONS FOR TYPE OF VALVE TO BE USED. VALVES ARE SHOWN ON PLANS FOR PLACEMENT ONLY.
18. ALL DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR FREE AREA REQUIRED.
19. ALL DIFFUSER, REGISTER, AND GRILLE SIZES INDICATED ON FLOOR PLANS ARE NECK SIZE REQUIRED.
20. ALL PIPING IS TO BE SLOPED A MINIMUM OF 1/4" PER HUNDRED FEET IN THE DIRECTION OF DRAINAGE.
21. NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED ON THIS PROJECT.
22. COORDINATE ENTIRE INSTALLATION WITH THE WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATIONS.

DEMOLITION GENERAL NOTES

1. CONTRACTOR SHALL VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK OF THIS SECTION. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY CONSTRUED BY EXPERIENCED OBSERVERS.
2. PRIOR TO COMMENCING WORK OF THIS SECTION, EXAMINE SITE AND CONDITIONS UNDER WHICH WORK WILL BE PERFORMED. DETERMINE EXACT LOCATIONS OF EXISTING EQUIPMENT, PIPING AND CONTROLS. REPORT TO OWNER ANY CONDITIONS THAT MIGHT ADVERSELY AFFECT WORK. COMMENCEMENT OF WORK SHALL BE CONSTRUED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS AND PREPARATORY WORK.
3. ABANDONING OF DUCTWORK, PIPING OR EQUIPMENT IN PLACE SHALL NOT BE ALLOWED. COMPLETE REMOVAL REQUIRED UNLESS NOTED OTHERWISE.
4. PIPING TO BE REMOVED: REMOVE PORTION OF PIPING INDICATED TO BE REMOVED AND CAP REMAINING PIPING WITH SAME OR COMPATIBLE PIPING MATERIAL.
5. DUCTS TO BE REMOVED: REMOVE PORTION OF DUCTS INDICATED TO BE REMOVED AND CAP REMAINING DUCTS WITH SAME OR COMPATIBLE DUCTWORK MATERIAL.
6. EQUIPMENT TO BE REMOVED: DISCONNECT AND CAP SERVICES AND REMOVE EQUIPMENT.
7. EQUIPMENT TO BE REMOVED AND SALVAGED: DISCONNECT AND CAP SERVICES AND REMOVE EQUIPMENT AND DELIVER TO OWNER.
8. COMPLY WITH ALL STATE AND LOCAL CODES AS TO REMOVAL AND DISPOSAL OF EQUIPMENT REMOVED FROM THE SITE.
9. COMPLY WITH GOVERNING EPA NOTIFICATION REGULATIONS BEFORE BEGINNING SELECTIVE DEMOLITION.
10. REMOVE PREVIOUSLY ABANDONED WORK IN THE WAY OF EXISTING CONSTRUCTION, OR AS NOTED.
11. COMPLY WITH HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
12. COMPLY WITH ANSI A10.6 (SAFETY REQUIREMENTS FOR DEMOLITION OPERATIONS) AND NFPA 241 (STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS).
13. PERMITS: GIVE ALL REQUIRED NOTICES, FILE ALL REQUIRED PLANS AND SPECIFICATIONS RELATING TO THE WORK OF THIS SECTION WITH THE PROPER AUTHORITIES AND PAY FOR ANY REQUIRED PERMITS.
14. ALL EQUIPMENT AND SYSTEMS TO BE DEMOLISHED UNDER THIS SECTION AND NOT DESIRED BY OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE ALL SUCH EQUIPMENT FROM THE SITE PROMPTLY AFTER DETACHMENT FROM BUILDING STRUCTURE.
15. STORAGE OR SALE OF REMOVED ITEMS OR MATERIALS ON-SITE IS NOT PERMITTED.
16. EXISTING PIPING SHOWN ON DRAWINGS DOES NOT INDICATE FULL EXTENT OF PIPING DEMOLITION. FIELD VERIFICATIONS REQUIRED.

MECHANICAL DRAWING LIST

DWG NO.	DRAWING TITLE
M000	MECHANICAL LEGEND
M102	MECHANICAL DEMOLITION DUCTWORK PLAN
M202	MECHANICAL DEMOLITION PIPING PLAN
M302	MECHANICAL NEW DUCTWORK PLAN
M402	MECHANICAL NEW PIPING PLAN
M502	MECHANICAL PRESSURIZATION PLAN
M600	MECHANICAL SCHEDULES AND DETAILS

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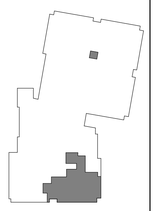
Key Plan



Project North

Maine Medical Center
LEVEL 2 OR RENOVATION

22 Bramhall Street, Portland, ME

REV	DESCRIPTION	DATE
	PERMIT SET	7.27.2017

STATE OF MAINE
SCOTT E. LECLAIR
No. 11519
LICENSED
PROFESSIONAL ENGINEER

SEAL:

PROJECT NUMBER: 2017009

DATE: 07/27/2017

SHEET TITLE AND NUMBER:

M000

MECHANICAL LEGEND